

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
Norfolk Division

VIRGINIA INNOVATION
SCIENCES, INC.,

Plaintiff,

v.

Case No.: 2:12cv548

SAMSUNG ELECTRONICS CO.,
LTD., ET AL.,

Defendants.

OPINION AND ORDER

This matter is before the Court following a Markman hearing, conducted for the purpose of construing nine disputed claim terms in the patents-in-suit. After careful consideration of the briefs submitted by the parties and the arguments advanced at the Markman hearing, the Court issues the following Opinion and Order detailing the claim constructions in this case.

I. FACTUAL AND PROCEDURAL HISTORY

At issue in this case are six patents: U.S. Patent No. 7,899,492 ("the '492 patent"), U.S. Patent No. 8,050,711 ("the '711 patent"), U.S. Patent No. 8,145,268 ("the '268 patent"), U.S. Patent No. 8,224,381 ("the '381 patent"), U.S. Patent No. 7,957,733 ("the '733 patent"), and U.S. Patent No. 8,135,398 ("the '398 patent"). All of the patents-in-suit claim priority to the '492 patent, which itself claimed priority to provisional

application number 60/588,359, filed on July 16, 2004. The '711, '268, and '381 patents are continuations of the '492 patent and all four share a substantively identical specification ("the '492 specification"). The '733 and '398 patents are continuations-in-part of the '492 patent; these two patents share a substantively identical specification, which includes all of the '492 specification, along with additional material ("the '733 specification"). Each of the patents-in-suit describes inventions intended to resolve the inconvenience and impracticability of viewing multimedia content on the small screens of mobile terminals.

A. The '492 Patent Family

The '492, '711, '268, and '381 patents (collectively, "the '492 patent family") are each titled "Methods, Systems and Apparatus for Displaying Multimedia Information from Wireless Communication Networks." Their shared specification and respective claims are directed toward methods, systems, apparatuses, and computer-readable mediums that can be utilized to convert multimedia signals appropriate for displaying content on a mobile terminal so as to render such content appropriate for display on an alternative display terminal.

The '492 specification describes a "mobile terminal signal conversion module" ("MTSCM"). E.g., '492 Patent, 3:52-54. The MTSCM "processes signals to accommodate reproduction by an

external device.” Id. at 3:58-59. To complete this process, the MTSCM “receives [a] video signal” and “processes the video signal to provide a converted video signal that has a display format and/or signal power level appropriate for an external display terminal that is separate” from the mobile terminal. Id. at 4:4-20.

Figures 2 and 3 of the '492 specification provide two block diagrams of the MTSCM. Figure 2 “illustrates one modular breakdown for the components of the MTSCM.” Id. at 4:55-56. “The MTSCM includes a mobile terminal interface module, a signal conversion module, and an external device interface.” Id. at 5:9-11. “The mobile terminal interface module accommodates receiving the multimedia signal from the mobile terminal.” Id. at 5:12-13. “The signal conversion module is in communication with the mobile terminal interface module and thus accesses the received multimedia signal. The signal conversion module recognizes the multimedia signal format, and processes the multimedia signal to provide a converted signal.” Id. at 5:22-27. Finally, “[t]he external device interface is in communication with the signal conversion module and thus accesses the converted signal. The external device interface also allows connection to the external (e.g., display) device . . . [and] may provide both the feeding of the converted signal

to the external device, and driving the external device.” Id. at 5:34-40.

Figure 3 is another block diagram illustrating an example of the MTSCM that “includes additional detail regarding the signal conversion aspect, and illustrates examples of differing types of external devices to which the MTSCM may provide converted signals.” Id. at 5:44-48. The MTSCM depicted “includes an interface/buffer module that is analogous to the previously described mobile terminal interface module” and in which “[t]he buffer and interfacing are configured to accommodate signal processing by the remaining elements.” Id. at 5:57-60. The MTSCM also includes a video compress decoder that “receives the multimedia signal” and “accommodates decompression of the received multimedia signal” through a “compression/decompression (CO-DEC) module.” Id. at 6:6-14. The video compress decoder “outputs a decompressed digital multimedia signal that is passed to the Digital Analog Video Encoder (DAVE) and/or the Digital/Digital Video Encoder (DDVE). The DAVE is configured to prepare signals for analog external display terminals, and the DDVE is configured to prepare signals for digital external display terminals.” Id. at 6:26-32. Both the DAVE and DDVE “receive the decompressed multimedia signal and convert the signals to the format(s) and signal power

level(s) required for the terminals to which they interface.”
Id. 6:32-36.

Although described as a “module,” the MTSCM “may [also] be provided as software, firmware, hardware, or any combination thereof.” Id. at 4:45-47. And, “the described functionality may alternatively be provided by an MTSCM having fewer, greater, or differently named modules from those illustrated in the figures.” Id. at 4:57-60. Furthermore, although all components are shown to reside in a common location, they “may be separated such that portions of the overall functionality are respectively provided by the mobile terminal, separate intermediate housing, and/or the external display device.” Id. at 4:61-67 & 5:1-3. Finally, “the MTSCM may be independently housed separately from both the mobile terminal and external display terminal, with respective connections to other devices to provide a system configuration that includes the three pieces of hardware (mobile terminal, conversion box, external display terminal),” id. at 6:62-67, or it “may be located in either the mobile terminal or the external display,” id. at 7:7-8.

B. The '733 Patent Family

The '733 and '398 patents (collectively “the '733 patent family”) are both entitled “Methods and Apparatus for Multimedia Communications with Different User Terminals.” Their shared specification and respective claims are directed toward methods,

systems, apparatuses, computer programs, and computer-readable mediums for providing "multimedia content to and from various different devices" through the conversion and sending or routing of such content. E.g., '733 patent 1:47-49.

The '733 specification describes several different systems including an Internet content delivery system where the "[p]rovision of Internet content is customized according to location", id. at 5:39-9:13, a "systematical solution for mobile payment," id. at 9:14-11:27, a system for "wireless management of tasks and corresponding alerts" for tasks such as "diaper management" or "home security monitoring," id. at 11:28-14:42, and a "system with mobile terminal signal conversion," id. at 14:43-19:57. For the "mobile terminal signal conversion" embodiments, the '733 family specification repeats the description and figures of the MTSCM from the '492 family specification.

The '733 specification also describes a "control system for multimedia communications between different terminals" designed to implement the '733 patent family's various applications. Id. at 19:58-60. The control system "receives, selects, converts, compresses, decompresses, and rout[e]s data" from one user terminal to another. Id. 20:17-19. The control system described provides both "a routing function and a connecting function, and functions bi-directionally," in that it "provides

for the transmission and receipt of content and converts such content in both directions depending upon the connected devices and corresponding protocols used by such devices." Id. at 19:61-67. This "Management Center (MC) System" is depicted in Figure 16 of the '733 specification.¹

Content received by the MC System is routed to various user terminals using a "data package that identifies the destination device." Id. at 21:15-17. The destination device can be identified by a "unique device identifier" in the data package, or "by referencing portions of the received data package according to a predefined protocol." Id. at 21:18-27. For example, "if the data package contains the identifier DI₁ it is determined that the communication is intended for the main television in the household." Id. at 21:41-43. "The data transmission between an MC System and user terminals can be one-way or two-way," but "the data transmitted is preferably bidirectional." Id. at 25:30-39.

In addition to the MC System, Figure 16 depicts a Centralized HUB System ("CHS") that "communicates with the MC System and/or Internet and/or other networks." Id. at 23:2-4.

¹ The MC System "includes a converter module with routines for selecting, extracting, compressing, decompressing, adjusting data, and converting the data format and/or power level and/or data package size/format." Id. at 20:42-46. It "also includes a mapping table and routing module," as well as data storage, and "may include software and/or hardware for filtering and treating viruses." Id. at 20:47-21:4.

The CHS can "be built into a cable modem, TV set, top box, or other device" and "may perform the functions described for the MC system." Id. at 23:4-8. Additionally, "[a]s shown in F[igure] 16, the CHS communicates with the Internet through ADSL or cable and cellular base stations through wireless connection. The consumer electronics items communicate with the CHS through wireless channels such as Bluetooth, UWB, NFC or wire line connection. [The] CHS is the center of this wireless communication system." Id. at 23:23-28. Thus, the MC System receives and converts multimedia content for transmission to various user terminals and the CHS operates as the center of the wireless communication system for such terminals. Further, because the specification makes clear the CHS may also perform the tasks described for the MC System, it appears that the embodiments of the claimed invention include systems utilizing an MC System only, a CHS only, or both an MC System and CHS. See, e.g., id. at 21:24-26 (describing the process to "obtain formatting, address, or other information" as one that can be performed by "the MC System (and/or CHS)").

The '733 specification also describes "a process for directing a television to display content using signals received from a remote location through a cellular communications network." Id. at 25:63-65. In this process, the MC System, the destination television, or a set-top box connected to the

television is "equipped with processing capability for carrying out the signal conversion requirements, as described in detail . . . regarding the MTSCM" disclosed in the '492 specification and again in the '733 specification. Id. at 26:6-9. The television or the set-top box is also "equipped to receive the signals wirelessly from a cellular base station and provide the corresponding conversion and direction to display the content on a given channel." Id. at 25:67-26:3. "The process initiates upon receipt of video content through a cellular communications channel." Id. at 26:22-23. "[T]he content as sent . . . [is] formatted as required. . . . The MTSCM functionality converts such signals from the cellular network and related format to the format used by the television (e.g., SD or HD standards)." Id. at 26:28-32. "Finally, the television is directed to display the converted content on a predetermined channel," such as "a tunable channel that is otherwise unused for other forms of content." Id. at 26:41-44.

C. Procedural History

In the instant patent infringement action, plaintiff Virginia Innovation Sciences, Inc. ("VIS") alleges that defendants Samsung Electronics Co., LTD, Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively "Samsung") have directly, indirectly, and willfully infringed the patents-in-suit by making, using,

offering for sale, selling, and/or importing a wide range of accused products, including smartphones, tablets, Blue-ray players, and hubs. Samsung denies any infringement, either literal or under the doctrine of equivalents, and asserts several affirmative defenses, including invalidity of all patents-in-suit, prosecution history estoppel, and other equitable doctrines. Additionally, Samsung alleges counterclaims seeking declarations of non-infringement and invalidity for each of the patents-in-suit.

The Court held its Markman hearing in this matter on June 11, 2013 at which it heard argument concerning the disputed claim terms reviewed below. Since this hearing, there have been numerous filings in this matter and several motions remain pending before the Court, in various stages of briefing. The Court does not address such matters here, but instead discusses only the proper construction of the disputed claim terms argued at the June 11, 2013 Markman hearing.

II. CLAIM CONSTRUCTION PROCEDURE

In Markman v. Westview Instruments, the United States Supreme Court succinctly explained the basis for, and importance of, claim construction:

The Constitution empowers Congress "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." Art. I, § 8, cl. 8. Congress first

exercised this authority in 1790, when it provided for the issuance of "letters patent," Act of Apr. 10, 1790, ch. 7, § 1, 1 Stat. 109, which, like their modern counterparts, granted inventors "the right to exclude others from making, using, offering for sale, selling, or importing the patented invention," in exchange for full disclosure of an invention, H. Schwartz, Patent Law and Practice 1, 33 (2d ed. 1995). It has long been understood that a patent must describe the exact scope of an invention and its manufacture to "secure to [the patentee] all to which he is entitled, [and] to apprise the public of what is still open to them." McClain v. Ortmayer, 141 U.S. 419, 424 (1891). Under the modern American system, these objectives are served by two distinct elements of a patent document. First, it contains a specification describing the invention "in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." 35 U.S.C. § 112; see also 3 E. Lipscomb, Walker on Patents §10:1, pp. 183-184 (3d ed. 1985) (Lipscomb) (listing the requirements for a specification). Second, a patent includes one or more "claims," which "particularly poin[t] out and distinctly clai[m] the subject matter which the applicant regards as his invention." 35 U.S.C. § 112. "A claim covers and secures a process, a machine, a manufacture, a composition of matter, or a design, but never the function or result of either, nor the scientific explanation of their operation." 6 Lipscomb § 21.17, at 315-316. The claim "define[s] the scope of a patent grant," 3 id. § 11:1, at 280, and functions to forbid not only exact copies of an invention, but products that go to "the heart of an invention but avoids the literal language of the claim by making a noncritical change," Schwartz, supra, at 82. . . .

Characteristically, patent lawsuits charge what is known as infringement, Schwartz, supra, at 75, and rest on allegations that the defendant "without authority ma[de], use[d] or [sold the] patented invention, within the United States during the term of the patent therefor" 35 U.S.C. § 271(a). Victory in an infringement suit requires a finding that the patent claim "covers the alleged infringer's product or process," which in turn necessitates a determination of "what the words in the claim mean."

Schwartz, supra, at 80; see also 3 Lipscomb § 11:2, at 288-290.

Markman v. Westview Instruments, 517 U.S. 370, 373-74 (1996).

It is well-settled that a determination of infringement requires a two-step analysis: "First, the court determines the scope and meaning of the patent claims asserted" and second, "the properly construed claims are compared to the allegedly infringing device." Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc) (citing Markman, 517 U.S. at 371-73). In conducting this analysis, it must be remembered that "[i]t is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)); see Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("First, we look to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention.").

A. Claim Construction Principles

Focusing on the first step of the infringement analysis, the Federal Circuit has repeatedly stated that "the words of a claim 'are generally given their ordinary and customary meaning,'" and that "the ordinary and customary meaning of a

claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Phillips, 415 F.3d at 1312-13 (quoting Vitronics, 90 F.3d at 1582). This provides "an objective baseline from which to begin claim interpretation" and is based upon "the well-settled understanding that inventors are typically persons skilled in the field of the invention and that patents are addressed to and intended to be read by others of skill in the pertinent art." Id. at 1313. As noted by the Federal Circuit:

It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field. The inventor's words that are used to describe the invention—the inventor's lexicography—must be understood and interpreted by the court as they would be understood and interpreted by a person in that field of technology. Thus the court starts the decisionmaking process by reviewing the same resources as would that person, *viz.*, the patent specification and the prosecution history.

Id. (quoting Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477 (Fed. Cir. 1998)). However, "[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.'" Acumed LLC v. Stryker Corp., 483 F.3d 800,

805 (Fed. Cir. 2007) (quoting Phillips, 415 F.3d at 1314). Finally, when construing claim terms and phrases, the Court cannot add or subtract words from the claims or appeal to "abstract policy considerations" to broaden or narrow their scope. SmithKline Beecham Corp. v. Apotex Corp., 403 F.3d 1331, 1339-40 (Fed. Cir. 2005); see Quantum Corp. v. Rodime, PLC, 65 F.3d 1577, 1584 (Fed. Cir. 1995) ("[I]t is well settled that no matter how great the temptations of fairness or policy making, courts do not redraft claims.").

B. Types of Evidence to Be Considered

In determining the meaning of disputed terms or phrases, the Court must first examine the claims themselves. See Phillips, 415 F.3d at 1312 (quoting Innova/Pure Water, 381 F.3d at 1115); see also Vitronics, 90 F.3d at 1582 ("[W]e look to the words of the claims themselves . . . to define the scope of the patented invention."). Indeed the Federal Circuit has stated that "the claims themselves," both asserted and unasserted, can be "valuable sources of enlightenment as to the meaning of a claim term," in part because "claim terms are normally used consistently throughout the patent." Phillips, 415 F.3d at 1314. Furthermore, differences in claims can also be enlightening, "[f]or example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption

that the limitation in question is not present in the independent claim." Id. at 1314-15.

The claims, however, "do not stand alone" and "'must be read in view of the specification, of which they are a part.'" Id. at 1315 (quoting Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)); see also Vitronics, 90 F.3d at 1582 ("[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term."); Multiform Desiccants, 133 F.3d at 1478 ("The best source for understanding a technical term is the specification from which it arose, informed, as needed, by the prosecution history."). The specification, as required by statute, describes the manner and process of making and using the patented invention, and "[t]hus claims must be construed so as to be consistent with the specification" Merck & Co. v. Teva Pharms. USA, Inc., 347 F.3d 1367, 1371 (Fed. Cir. 2003); see 35 U.S. § 112 (establishing the requirement that the specification describe the invention in "full, clear, concise, and exact terms . . . "). The Federal Circuit and Supreme Court have thus long emphasized the specification's important role in claim construction, noting that, usually, the specification "is dispositive," as it is "the single best guide to the meaning of the disputed term." Phillips, 415 F.3d at 1315 (quoting

Vitronics, 90 F.3d at 1582); see Markman, 517 U.S. at 389 (referencing the "standard construction rule that a term can be defined only in a way that comports with the instrument as a whole"); Multiform Desiccants, 133 F.3d at 1478.

In addition to the claims and specification, the Court should consider the prosecution history, which consists of the complete record of the proceedings before the United States Patent and Trademark Office ("PTO"), including the prior art cited during the examination of the patent and any subsequent reexaminations. Phillips, 415 F.3d at 1317. The prosecution history "provides evidence of how the PTO and the inventor understood the patent" and "can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Id. (citing Vitronics, 90 F.3d at 1582-83); see Chimie v. PPG Indus., Inc., 402 F.3d 1371, 1384 (Fed. Cir. 2005) (indicating that the purpose of consulting the prosecution history as part of claim construction is to exclude any disclaimed interpretation). "At the same time, because prosecution history represents an ongoing negotiation between the PTO and the inventor, 'it often lacks the clarity of the specification and thus is less useful for claim construction purposes.'" Trading Technologies Int'l, Inc. v. eSpeed, Inc.,

595 F.3d 1340, 1352 (Fed. Cir. 2010) (quoting Netcraft Corp. v. eBay, Inc., 549 F.3d 1394, 1401 (Fed. Cir. 2008)).

The Court may also examine extrinsic evidence, which includes "all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." Markman, 52 F.3d at 980. Expert testimony can be useful:

to provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.

Phillips, 415 F.3d at 1318; see also Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1308-09 (Fed. Cir. 1999). Technical dictionaries may also provide the Court with a better understanding of the underlying technology and the way in which one of skill in the art might use the claim terms. Phillips, 415 F.3d at 1318; see also Vitronics, 90 F.3d at 1584 n.6. General usage dictionaries may also be consulted, as they are at times "useful to assist in understanding the commonly understood meaning of words." Phillips, 415 F.3d at 1322. Specifically, "[a] dictionary definition has the value of being an unbiased source 'accessible to the public in advance of litigation.'"

Id. (quoting Vitronics, 90 F.3d at 1585).² However, the Federal Circuit cautions that "'a general-usage dictionary cannot overcome art-specific evidence of the meaning' of a claim term," that "the use of the dictionary may extend patent protection beyond what should properly be afforded by the inventor's patent," and that "[t]here is no guarantee that a term is used in the same way in a treatise as it would be by the patentee." Phillips, 415 F.3d at 1322 (quoting Vanderlande Indus. Nderland BV v. I.T.C., 366 F.3d 1311, 1321 (2004)). Additionally, "different dictionaries may contain somewhat different sets of definitions for the same words. A claim should not rise or fall based upon the preferences of a particular dictionary editor, or the court's independent decision, uninformed by the specification, to rely on one dictionary rather than another." Id. Thus, "while extrinsic evidence 'can shed useful light on the relevant art,' . . . it is 'less significant than the

² In Phillips, the Federal Circuit expressly discounted the approach taken in Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed. Cir. 2002), in which the court placed greater emphasis on dictionary definitions of claim terms. Phillips, 415 F.3d at 1319-24 ("Although the concern expressed by the court in Texas Digital was valid, the methodology it adopted placed too much reliance on extrinsic sources such as dictionaries, treatises, and encyclopedias and too little on intrinsic sources, in particular the specification and prosecution history."). The Phillips opinion reaffirmed the approach used in Vitronics, Markman, and Innova as the proper approach for claim construction, but acknowledged that there was "no magic formula," and that a district court is not "barred from considering any particular sources . . . as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence." Id. at 1324.

intrinsic record in determining "the legally operative meaning of claim language."'" Phillips, 415 F.3d at 1317 (quoting C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004)).

With the foregoing principles in mind, the Court will now examine the patents and the disputed claim terms.

III. ANALYSIS OF THE DISPUTED CLAIM TERMS

In advance of the Markman hearing conducted by this Court, the parties submitted a joint claim construction and prehearing statement that included three (3) agreed upon claim terms and nine (9) disputed claim terms. The Court adopts the parties' stipulated constructions of the agreed upon terms³ and addresses each of the disputed claim terms herein.

³ Accordingly, the Court adopts the following constructions:

1) "[comprises ...] a power level appropriate for driving the alternative display terminal" is construed to mean "[comprises ...] a signal power level appropriate for driving the alternative display terminal."

2) "a power level required by the alternative display terminal" is construed to mean "a signal power level required by the alternative display terminal."

3) "housing interface" is construed to mean "interface of the housing."

1. "mobile terminal"

a. Proposed Constructions

VIS: hand-held mobile device such as a cellular phone or personal digital assistant, not a desktop or laptop computer

Samsung: a portable cellular-equipped device

b. Discussion

VIS's construction of this term is derived from a portion of the '492 specification, repeated in the '733 specification, that attempts to define the disputed term. Samsung proposes a more limited construction, based on the embodiments listed in the specifications, that requires that all "mobile terminals" be "cellular-equipped," or capable of receiving communications from a cellular communications network. At the Markman hearing, the parties agreed that a proper construction of this disputed term would include the descriptors "device" and "portable." They disagreed as to what further limitations, if any, were appropriate based on the intrinsic and extrinsic evidence. Before considering this question, the Court first addresses the argument that the patentee's attempted definition of this term should control.

Patent law allows a patentee to be a lexicographer, meaning that he may "use terms in a manner other than their ordinary meaning." Vitronics, 90 F.3d at 1582. However, "[t]o act as its own lexicographer, a patentee must 'clearly set forth a

definition of the disputed claim term' other than its plain and ordinary meaning." Thorner v. Sony Computer Entm't Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (quoting CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Any special meaning must appear with "reasonable clarity, deliberateness, and precision" in the specification or prosecution history. Abbott Labs v. Syntron Bioresearch, Inc., 334 F.3d 1343, 1354 (Fed. Cir. 2003) (emphasis omitted) (quoting In re Paulsen, 30 F.3d 1475, 1480 (Fed. Cir. 1994)). "And '[w]here the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside . . . the patent,' even if the terms might otherwise be broad enough to cover that feature." Medtronic, 695 F.3d at 1275 (quoting Thorner, 288 F.3d at 1366).

The '492 specification and the '733 specification both provide that:

As used herein, mobile terminal refers to typically hand-held mobile devices such as cellular phones and personal digital assistants. Although these devices include an execution platform as well as input and display capabilities, such devices are distinguished from personal computers, such as desktop or laptop computers, which are not designed for convenient handheld usage.

E.g., '492 patent, 4:37-43; '733 patent, 16:5-11 (emphasis added). Thus, the specifications evince the patentee's deliberate attempt to define this disputed term. See 3M

Innovative Props. Co. v. Avery Dennison Corp., 350 F.3d 1365, 1374 (Fed. Cir. 2003) (concluding that the patentee acted as its own lexicographer when the specification "expressly state[d] that ``embossed" means. . . ."); Abbott Labs., 334 F.3d at 1354-55 (finding an intent to define a disputed term when the specification introduced the term with the phrase, "[a]s used herein," but rejecting the definition as lacking reasonable clarity and precision). However, the patentee's attempted definition is stated only in exemplary terms. E.g., '492 patent, 4:37-43 (defining "mobile terminal," as "refer[ing] typically to hand-held mobile devices such as cellular phones and personal digital assistants" and excluding "personal computers, such as desktop or laptop computers" (emphases added)). Such definition is not stated with reasonable clarity and precision because it discloses only examples of devices that fall within its scope and examples of those that are excluded. See Abbott Labs., 334 F.3d at 1355 ("Because the specification provides two alternative definitions for the term at issue, the specification does not define the claim term in the manner required.").

Because the patentee failed to clearly and precisely define this claim term in the specifications, the Court gives the term its ordinary and customary meaning. See Elekta Instrument S.A. v. O.U.R. Scientific Intern., Inc., 214 F.3d 1302, 1307 (Fed.

Cir. 2000) (requiring a patentee acting as his own lexicographer to evince "express intent to impart a novel meaning" and to "clearly redefine [the] claim term" and noting that, when these requirements are not met, "claim terms take on their ordinary meaning").

The parties have agreed that a "mobile terminal" is a "portable device." See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999) (noting that the court need only construe claims in controversy "to the extent necessary to resolve the controversy"). However, they disagree as to what further limitations should be included in the construction of this claim term. Their main dispute is whether the term is limited to cellular-equipped devices.

Reviewing the claims and specifications, the Court finds little counseling for or against Samsung's proposed limitation. The claims describe the mobile terminal receiving "video signals" from both "cellular communications network[s]" and "wireless network communication[s]." See, e.g., '492 patent, 8:30-33; '268 patent, 8:32-35. The specifications further provide that these networks "include but are not limited to a cellular communications network or a wireless local area network." E.g., '492 patent, 3:39-41. The fact that a mobile terminal may receive multimedia content from various networks does not indicate whether it must have the capacity to receive

such content from a specific type of network. It is likewise not clear from the claims and specifications, as VIS contends, that limiting this claim term to "portable cellular-equipped devices" would exclude preferred embodiments. Pl.'s Opening Claim Construction Br. 8, ECF No. 64 (citing SynQor, Inc. v. Artesyn Tech., Inc., 709 F.3d 1365, at 1378-79 (Fed. Cir. 2013)).

Samsung argues that its proposed limitation is supported by the '492 patent's prosecution history, in which the patentee allegedly distinguished "mobile terminals" from prior art on the basis that the prior art disclosed devices that were "not configured to receive the claimed video signal in a cellular network communication," that is, that such devices were not cellular-equipped. Defs.' Opening Claim Construction Br. ("Defs.' Opening Br.") Ex. L at VIS-001367, ECF No. 65. The prosecution history can inform the meaning of claim language if it demonstrates "how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d at 1317 (citing Vitronics, 90 F.3d at 1582-83). To limit the meaning of a claim term, however, the patentee must make "a clear and unmistakable disavowal of scope during prosecution," by, for example, "explicitly characteriz[ing] an aspect of his invention in a

specific manner to overcome prior art." Purdue Pharma L.P. v. Endo Pharms. Inc., 438 F.3d 1123, 1136 (Fed. Cir. 2006).

Here, Samsung argues that VIS limited this claim term to cellular-equipped devices during the prosecution of the '492 patent, in which the patentee distinguished "mobile terminals" from prior art—U.S. Pub. No. 2004/0177376 to Caspi et al. ("Caspi")—that disclosed "a search system for controlling a digital personal video stream manager, or DPVSM." Defs.' Opening Br. Ex. L at VIS-001366, ECF No. 65. The DPVSM "receive[d] content through the home network subsystem, via a LAN connection, so that it [could] receive and display digital content . . . received by and made available through the home network subsystem," which Caspi disclosed could be "controlled by a personal computer." Id.

During the '492 patent prosecution, the patentee first distinguished the personal computer disclosed in Caspi on the basis that it was "not configured to receive the claimed video signal in a cellular network communication that is sent to the mobile terminal." Id. at VIS-001366. Although this initial distinction appears to be grounded in the device's ability to receive content from a cellular network communication, the references that follow make clear that the patentee distinguished Caspi on both the absence of a mobile terminal and the type of communications network involved. Specifically, the

patentee emphasized that the computer disclosed in Caspi received content through "a conventional home broadband network environment," implemented by "conventional Local Area Network communications . . . (whether wireless or wired)" and that such method of receipt "is clearly no example of a mobile terminal receiving a video signal in a cellular network communication." Id. at VIS-001367 (emphasis in original). The patentee concluded: "Caspi thus discloses neither the mobile terminal nor the type of mobile terminal communications claimed." Id. (emphases added); see also id. at VIS-001368 ("[S]ince Caspi does not disclose a mobile terminal, or receiving video signal from the claimed cellular network communication, it cannot possibly disclose [the claimed] conversion [process]." (emphasis added)).

Viewing Samsung's proposed limitation in light of all of the patentee's statements during the '492 patent prosecution, the Court concludes that the patentee did not make "a clear and unmistakable disavowal" of all devices lacking the ability to receive communications from a cellular communications network. Purdue Pharma, 438 F.3d at 1136. Rather, as VIS contends, the patentee distinguished Caspi on the basis that it did not disclose a mobile terminal and on the basis that the computer disclosed in Caspi was "not configured to receive the claimed video signal in a cellular network communication that is sent to

the mobile terminal." Pl.'s Resp. Claim Construction Br. ("Pl.'s Resp. Markman Br.") 17, ECF No. 69 (quoting Defs.' Opening Br. Ex. L at VIS-001366, ECF No. 65).

Therefore, the intrinsic record does not support Samsung's proposed limitation of this claim term to "cellular-equipped" devices. The Court has considered Samsung's proffered technical dictionary definitions for "mobile phone," incorporating the definition for "cellular communications," and "cellular mobile radio telephone." Defs.' Opening Br. Exs. M & N, ECF No. 65. However, the Court does not find such extrinsic evidence particularly instructive to its analysis, especially when the intrinsic record fails to disclose the proposed limitation. See Phillips, 415 F.3d at 1320-22 (cautioning against overreliance on dictionary definitions when construing disputed terms).

For the above reasons, the Court concludes that the claim term, "mobile terminal," is not limited to cellular-equipped devices. However, the Court agrees with the parties that some further description or limitation of this claim term—beyond the agreed-to "portable device"—is necessary. Although the Court has determined that the patentee's attempted definition of this claim term lacks sufficient clarity and precision, the Court considers the characteristics set forth in that definition when determining the term's plain and ordinary meaning. See Aventis Pharms. Inc. v. Amino Chem. Ltd., 715 F.3d 1363, 1373 (Fed. Cir.

2013) ("The specification provides the 'best source' for construing a claim term and determining the inventor's intent regarding use." (quoting Multiform Desiccants, 133 F.3d at 1478)).

First, the patentee's attempted definition describes "typically handheld mobile devices such as cellular phones and personal digital assistants." E.g., '492 patent, 4:37-39. VIS initially proposed a construction that included the limitation "handheld." Samsung opposed this limitation as ambiguous. At the Markman hearing, the Court inquired as to the propriety of certain size limitations, drawn from the background sections of the specifications. See, e.g., '492 patent 1:47-2:6 (describing the problems associated with the "limited size (e.g., 2x3") and capability of the mobile terminal screen" and offering a solution to such "display limitations"). Neither party supported the importation of such specific size limitations. Instead, VIS proposed an alternative limitation, drawn from the patentee's attempted definition, "convenient for handheld usage." Hr'g Tr. 56-57, June 11, 2013, ECF No. 92; e.g., '492 patent, 4:43. Based on the context of this limitation, the Court agrees that the proper construction of this term includes a requirement that "mobile terminals" be "convenient for handheld usage." Specifically, by distinguishing "desktop or laptop computers" from the claimed "mobile terminals," the

patentee made "clear that the invention does not include a particular feature," that is, the feature of being inconvenient for handheld usage. Medtronic, 695 F.3d at 1275 (quoting Thorner, 288 F.3d at 1366) (internal quotation marks omitted). See also '492 patent, 4:39-43. If all devices that are inconvenient for handheld usage (including laptops and desktop computers) are expressly excluded from the claim term, then the proper construction must include a limitation that the portable device be convenient for handheld usage.

Second, and in the same vein, the specifications make clear that this claim term excludes "personal computers." E.g., '492 patent, 4:39-43 ("[S]uch devices are distinguished from personal computers, such as desktop or laptop computers, which are not designed for convenient handheld usage."). When "the specification reveals 'an intentional disclaimer, or disavowal, of claim scope by the inventor,' the scope of the claim, 'as expressed in the specification, is regarded as dispositive.'" SkinMedica, Inc. v. Histogen Inc., __ F.3d __, No. 2012-1560, 2013 WL 4487603, at *7 (Fed Cir. Aug. 23, 2013) (quoting Phillips, 415 F.3d at 1316). Although the Court may not import limitations from the specification into the claim, it "can rely on the specification 'to understand what the patentee has claimed and disclaimed.'" Id. (emphasis added) (quoting SafeTCare Mfg., Inc. v. Tele-Made, Inc., 497 F.3d 1262, 1270

(Fed. Cir. 2007)). Accordingly, the Court concludes that a proper construction of this claim term expressly excludes personal computers.

The Court does not, however, construe this claim term to include the examples set forth in the patentee's attempted definition. The Court must "avoid importing limitations from the specification into the claims." Phillips, 415 F.3d at 1323. To do so, the Court must "keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide the best mode for doing so." Id. (citing Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524, 1533 (Fed. Cir. 1987)). "One of the best ways to teach a person of ordinary skill in the art how to make and use the invention is to provide an example of how to practice the invention in a particular case." Id. When such examples are provided, the Court must determine whether the cited embodiments "define the outer limits of the claim term or merely [are] exemplary in nature." Id. "The manner in which the patentee uses a term within the specification and claims usually will make the distinction apparent." Id. (citing Snow v. Lake Shore & M.S. Ry. Co., 121 U.S. 617, 630 (1887)).

Here, the patentee's attempted definition includes two examples of devices that are "mobile terminals" (cellular phones and personal digital assistants) and two examples of devices

that are not (desktop or laptop computers). E.g., '492 patent, 4:37-43. These embodiments do not appear to "define the outer limits" of the claim term, but instead are exemplary. Although VIS's proposed construction of the term counsels for their inclusion, VIS cites no authority for this approach. Indeed, such proposals have traditionally been rejected, based on Phillips. See, e.g., Layne Christensen Co. v. Bro-Tech Corp., No. 09-2381-JWL, 2011 WL 3022445, at *5 (D. Kan. July 22, 2011); see also Plant Equip., Inc. v. Intrado, Inc., No. 2:09-CV-395-JRG, 2012 WL 1468594, at *11 (E.D. Tex. Apr. 27, 2012). Additionally, the Court observes that the inclusion of such examples might suggest to the factfinder that there are additional unspecified device characteristics, not included in the Court's construction, relevant to the determination of whether an accused product falls within the scope of the proposed construction. See Every Penny Counts, Inc. v. Am. Express Co., 563 F.3d 1378, 1383 (Fed. Cir. 2009) (citing O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1361-62 (Fed. Cir. 2008)) (observing that it is the court's obligation "to ensure that questions of the scope of patent claims are not left to the jury"). Accordingly, the Court does not construe this claim term to include a non-exhaustive list of exemplary embodiments.

Having carefully considered the parties' proposed constructions and the arguments advanced at the Markman hearing, particularly with reference to the intrinsic record, the Court adopts the below construction of "mobile terminal."

c. Construction

A portable device convenient for hand-held usage, excluding personal computers

2. **"housing"**

a. Proposed Constructions

VIS: a separate device, outside the mobile terminal

VIS Alternative: a separate enclosed device, outside the mobile terminal

Samsung: enclosure

b. Discussion

This disputed claim term is found only in the dependent claims of the '268 and '381 patents. See, e.g., '268 patent, 8:61-62; '381 patent, 9:14-18. The parties agreed at the Markman hearing that the claim term should be construed as an "enclosure" that is outside the mobile terminal.⁴ However, they

⁴ VIS argued that the claims and specifications require that this claim term be construed as something "outside the mobile terminal." VIS had previously proposed the additional limitation that the "housing" be "separate," but conceded at the Markman hearing that such additional limitation was not necessary and could be omitted as potentially confusing. Hr'g Tr. 73, June 11, 2013, ECF No. 92 (citing Pl.'s Resp. Markman Br. 24 n.15, ECF No. 69). At the Markman hearing, Samsung did not oppose a construction including the "outside the mobile terminal" limitation, to the extent the Court rejected its proposed construction of "enclosure." Id. at 75.

disagreed as to whether the claimed enclosure should be construed as a separate device or merely as a covering or shell.

Samsung contends that the language of several dependent claims requires the Court to construe this claim term as a mere enclosure; specifically, that the dependent claims "wherein the conversion device resides in a housing of the alternative display terminal" preclude a construction of "housing" as a device. E.g., '268 patent, 8:61-62; '381 patent, 10:5-7. The Court does not read the claim language to require such a limited construction.

First, the claims cited by Samsung in support of their proposed construction do not disclose the proper construction of the disputed claim term. Rather, they indicate that an alternative display terminal can have a "housing" and that the conversion device (MTSCM) can reside in that "housing." See, e.g., '268 patent, 8:61-62, 9:44-46; '381 patent, 8:62-63. The relationship of this disputed term vis-à-vis other claim terms is instructive, but, alone, does not require the limited construction that Samsung proposes. Indeed, the language of the '381 patent's dependent claims, and of the specifications, indicates the "housing" is, as VIS contends, a device.

Unlike the brief descriptions of this term cited by Samsung, several dependent claims in the '381 patent describe

the "housing," in detail, as an active and integral part of the claimed video signal conversion process. Specifically:

12. The method of claim 1, wherein the mobile terminal receives the video signal sent from the wireless network communication, provides the video signal to a housing through a housing interface, such that the said receiving of the video signal is through the housing interface of the housing.

17. The method of claim 1, wherein a housing having a housing interface is configured to interface with the mobile terminal, and wherein the housing provides the converted video signal to the alternative display terminal through the HDMI.

18. The method of claim 17, wherein at least a portion of said processing the video signal occurs in the housing.

'381 patent, 9:14-18, 9:33-37, and 9:38-39 (emphases added). See also id. at 10:26-31, 10:39-43, 11:21-12:3, 12:13-17, and 12:18-19 (describing nearly identical dependent claims which depend from other independent claims). Thus, the majority of the claims that use the disputed term contemplate a device capable of receiving and transmitting video signals and, in some embodiments, processing such signals. A construction limiting the term "housing" to mean "enclosure," specifically excluding or without reference to such capabilities, is insufficient. VIS's proposed construction, "device," therefore, better conveys the meaning of the claim term.

Samsung attempts to distinguish the '381 patent's detailed descriptions of this claim term on the ground that the '268 patent's earlier references to "a device within a housing"

foreclose any construction of this term as something other than an "enclosure." Defs.' Reply Claim Construction Br. ("Defs.' Reply Markman Br.") 24, ECF No. 70. Samsung acknowledges that such a construction will render some of VIS's claims technically deficient. Id. at 23. But Samsung contends that the Court cannot use claim construction to correct VIS's alleged drafting error (and misuse of this claim term) so as to preserve the validity of later dependent claims. Id. (quoting Pfizer, Inc. v. Ranbaxy Labs. Ltd., 457 F.3d 1284, 1292 (Fed. Cir. 2006)).

As noted above, however, the dependent claims on which Samsung relies do not require the limited construction it proposes. Nor is Samsung's proposed limitation supported by the specifications, which, importantly, are substantively identical across the '268 and '381 patents. In describing the functionality of the MTSCM as depicted in Figure 1, the specifications observe that "[i]n the illustrated embodiment, a mobile terminal signal conversion module (MTSCM) resides within a separate housing, outside the cellular phone." E.g., '268 patent, 3:55-57. The specifications continue: "The cellular phone is connected to the MTSCM. This may be accommodated by a cable connection that interfaces the cellular phone to the MTSCM housing. Through this connection, the MTSCM receives the video signal from the cellular phone." E.g., '268 patent, 4:4-8 (emphasis added). Finally, "following the signal conversion,

the MTSCM provides the converted video signal to the external display terminal," a process that "may be accommodated through a connection between the MTSCM housing and the external display terminal as shown." E.g., '268 patent, 4:33-39. Similarly, in describing Figure 2, the specifications note that "the overall functionality of the MTSCM may be separated such that portions of the overall functionality are respectively provided by the mobile terminal, separate intermediate housing, and/or the external display device." Id. at 5:2-6 (emphasis added). Thus, like the bulk of the claims including this term, the specifications contemplate a device capable of receiving and transmitting video signals and, in some embodiments, performing at least some portion of the claimed conversion process.

Based on the claims and specifications, the Court concludes that this term is properly construed to be a "device." This conclusion is not undermined by the fact that the specifications also use the term "intermediate device" in describing the claimed process. Although different words in a patent are generally assigned different meanings, any inference arising from the use of such distinct terms may be discounted if the terms "are very similar in meaning." Innova/Pure Water, 381 F.3d at 1119-20 (rejecting distinct constructions of the terms "connected" and "associated"). Here, it is clear that the

specifications use the terms "housing" and "intermediate device" interchangeably.

Additionally, although modules as shown to reside in a common location, it is noted that the functionality may reside in separate components of a system that includes a mobile terminal, an external monitor, and (optionally) an intermediate device housing the MTSCM and interfacing the mobile terminal and external monitor. In other words, the overall functionality of the MTSCM may be separated such that portions of the overall functionality are respectively provided by the mobile terminal, separate intermediate housing, and/or the external display device.

'381 patent, 4:64-5:6 (emphases added). When terms lack discernibly different meanings, "the patentee [may have simply] used different words to express similar concepts, even though" doing so is a "confusing drafting practice." Innova/Pure Water, 381 F.3d at 1120 (citing Bancorp Servs., LLC v. Hartford Life Ins. Co., 359 F.3d 1367, 1373 (Fed. Cir. 2004) (noting that the correspondence between a reference in a claim and one in the portion of the specification related to that claim "provides substantial support" for the "contention that, as used in the patent, the terms . . . are equivalent"))). Here, although the claims and specification employ different terms—device and housing—the claims and specifications appear to assign those terms very similar meanings. Accordingly, the Court construes "housing" as "device" regardless of the fact that the terms are grammatically distinct.

Having carefully considered the parties' proposed constructions and the arguments advanced at the Markman hearing, particularly with reference to the intrinsic record, the Court adopts the below construction of "housing."

c. Construction

An enclosed device outside the mobile terminal

3. "converted video signal"

a. Proposed Constructions

VIS: Plain and ordinary meaning. No construction required.

Samsung: a video signal where the underlying video content has been changed to be appropriate for display on the alternative display

b. Discussion

The crux of the parties' dispute respecting this term is whether a "converted video signal" requires some change to the underlying video content. VIS maintains that this term does not require construction because, as used in the specification, the term simply requires that the video signal has changed. Samsung argues for a narrow construction requiring some change to the underlying video content, based on the prosecution history. VIS maintains that Samsung's construction is improper because it would exclude all embodiments of the claims at issue and because it is based on a misinterpretation of statements reflected in the prosecution history of the '492 patent. The Court concludes that Samsung's proposed construction is inconsistent with the

plain language of all independent claims in the '492, '711, '268, and '381 patents and is not clearly required by the prosecution history and, therefore, should be rejected.

The term "converted video signal" is used in several of the '492, '711, '268, and '381 patents' independent and dependent claims. Although it is referenced twice in the corresponding specifications, the term is not further defined in either the claims or the specification. In determining the proper construction of this disputed term, the Court looks first to the claims themselves, considering not only the use of the same term across claims, but also "the context of the surrounding words." ACTV, Inc. v. Walt Disney, Co., 346 F.3d 1082, 1088 (Fed. Cir. 2003); see also Phillips, 415 F.3d at 1314.

The independent claims in the '492, '711, '268, and '381 patents describe methods, systems, apparatuses, computer memories storing program code, and non-transitory computer readable mediums storing program code that contemplate the receiving, processing, and providing of video signals to accommodate the reproduction of video content by an alternative display terminal. See '492 patent, 8:26-50, 9:10-31, and 10:6-29; '711 patent, 8:26-44, 8:62-9:15, and 9:36-10:10; '268 patent, 8:29-50, 9:12-33, 10:10-29; '381 patent, 8:30-51, 9:40-61, and 10:44-63 (collectively, '492 family independent claims"). The context of these claims suggest that a "converted

video signal" does not require some change to the underlying video content.

First, all of the '492 family independent claims expressly distinguish "video signals" from "video content." See, e.g., '492 patent, 8:26-31 (describing "[a] method comprising: receiving by a conversion module a video signal appropriate for displaying a video content on a mobile terminal). Generally, different words in a patent are construed as having different meanings, unless the intrinsic evidence reveals that the words are given very similar meanings. See Innova/Pure Water, 381 F.3d at 1119-20. Here, the plain language of the claims contemplate that the video signal supports the display of the video content, and thus that the two terms have different meanings. Nothing in the claims or specifications counsels otherwise.

Second, the plain language of the claims also indicates that the video content is not changed during the claimed signal conversion processes. Generally, if a patent repeatedly employs the same word, that word is presumed to have the same meaning. See Phillips, 415 F.3d at 1314. The claims use the same term, "video content," to describe the content displayed both before and after the claimed conversion processes. See, e.g., '492 patent, 8:26-50 (describing first the receipt of "a video signal appropriate for displaying a video content on a mobile

terminal," the processing of that signal to produce a converted video signal, and the provision of the converted video signal "to the alternative display terminal to accommodate displaying the video content by the alternative display terminal"). Thus there is a presumption that the same content is displayed at both ends of the claimed processes, albeit on different display terminals.

Not only do the '492 family independent claims use the same term to describe the content displayed on both ends of the conversion process, but, when describing the display of such content after that process, the independent claims describe the content using a definite, as opposed to indefinite, article. Id. at 8:47-50 (describing the provision of the converted video signal to the alternative display terminal "to accommodate displaying the video content" (emphasis added)). Generally, the use of a definite article will not be construed to somehow implicate a new element. Edward D. Manzo, Patent Claim Construction in the Federal Circuit § 2:31 (2011) ("The introduction of a new element is accomplished through the use of an indefinite article and not through the use of a definite article.") (citing Tuna Processors v. Hawaii Int'l Seafood, 327 F. App'x 204, 210 (Fed. Cir. 2009) (nonprecedential)). Thus, when a claim uses a definite article in its discussion of a term, that term is construed "as referring to an element that

has been established earlier in a claim." Id. Here, the '492 family independent claims use the same term, "video content," before and after the video signal is converted, introducing it first with an indefinite article (suggesting that such content is a new element) and then with a definite article (suggesting that the video content is the same content referenced earlier in the claim).

The plain language and context of the '492 family independent claims in which the term "video content" appears, reveal that the disputed term, "converted video signal" does not contemplate a change to the underlying video content. Rather, as VIS argues, the term requires only a change to the video signal identified at the beginning of the claim. See Pl.'s Opening Markman Br. 11, ECF No. 64 ("[T]he term simply requires that the video signal has changed, such as by altering the video format or changing the signal strength.").

The '492 specification supports VIS's proposed construction. Although this specification does not assign any special meaning to the disputed term, it does contain revealing statements as to the advantages of the claimed inventions that assist the Court in its construction. See ICU Med. v. Alaris Med., 558 F.3d 1368, 1375 (Fed. Cir. 2009) (quoting Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed. Cir. 2005)) (holding that it is "entirely proper to consider the functions

of an invention in seeking to determine the meaning of particular claim language" and adding functional language from the specification to define the degree to which the claimed spike was required to be pointed). Indeed, "the problem the inventor was attempting to solve, as discerned from the specification and prosecution history, is a relevant consideration" when construing a disputed term. CVI/Beta Ventures, 112 F.3d 1146, 1160 (Fed. Cir. 1997) (citing Applied Materials v. Advanced Semiconductor Materials, 98 F.3d 1563, 1573 (Fed. Cir. 1996)). Ordinarily, the final construction should align with the purpose of the patented invention. See, e.g., Anascape v. Nintendo, 601 F.3d 1333, 1337 (Fed. Cir. 2010); Innovad Inc. v. Microsoft Corp., 260 F.3d 1326, 1332-33 (Fed. Cir. 2001).

Here, the specification generally describes the evolution and functionality of handheld mobile terminals, including the capacity to support high rate multimedia data services resulting in "rich multimedia information being destined for display on the small screens typical of cellular phones (or the like)." E.g., '492 patent, 1:40-42. The written description goes on to state that "[t]he limited size (e.g., 2x3") and capability of the mobile terminal screen may render enjoyment of the high rate data flow applications inconvenient, and in some instances useless." Id. at 1:47-50. It concludes that: "What is needed

is a solution to the problem of diminished user enjoyment of mobile terminals because of display limitations." Id. At 2:4-6. Thus, the patented inventions were designed to solve the problems associated with attempting to view video content on the small displays of mobile terminals. Their stated purpose is to enable users to display that same content on a large display terminal. Reading the disputed term in light of the specification's description supports the construction of "converted video signal" as "a video signal that has been changed," and counsels against including a limitation that the underlying video content is also changed.

Samsung does not contend that the claims or specification require its proposed limitation. Rather, Samsung contends that the patentee's statements during the prosecution of the '492 patent counsel against applying the plain and ordinary meaning of this disputed claim term, because the patentee allegedly disclaimed any construction that does not require a change to the underlying video content. VIS denies any disclaimer and alleges that Samsung's argument is based on an incomplete reading of the prosecution history.

The prosecution history can inform the meaning of claim language "by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it

would otherwise be." Phillips, 415 F.3d at 1317. However, "[c]laim language and the specification generally carry greater weight than the prosecution history." HTC Corp. v. IPHCom GmbH & Co., KG, 667 F.3d 1270, 1276 (Fed. Cir. 2012). As the Federal Circuit has noted, "because prosecution history represents an ongoing negotiation between the PTO and the inventor, 'it often lacks the clarity of the specification and thus is less useful for claim construction purposes.'" Trading Techs. Int'l, 595 F.3d at 1352 (quoting Netcraft, 549 F.3d at 1401). For a patentee to have disclaimed a particular construction during prosecution, he or she must have made "a clear and unmistakable disavowal of scope during prosecution" by, for example "explicitly characteriz[ing] an aspect of his invention in a specific manner to overcome prior art." Purdue Pharma, 438 F.3d 1136 (emphasis added); see also Microsoft Corp. v. Multi-Tech Systems, Inc., 357 F.3d 1340, 1349 (Fed. Cir. 2004). When remarks made by a patentee may be viewed as amenable to multiple reasonable interpretations, they cannot give rise to prosecution disclaimer. Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1324 (Fed. Cir. 2003) (reviewing Northner Telecom Ltd. V. Samsung Elecs. Co., 215 F.3d 1281, 1293-95 (Fed. Cir. 2000), which rejected prosecution history statements as a basis for narrowing broad language because such statements were "far too slender a reed to support the judicial

narrowing of a clear claim term"). Here, the prosecution history does not reveal that VIS disclaimed all constructions of "converted video signal" except those requiring a change to the underlying video content, despite Samsung's argument to the contrary.

During the '492 patent prosecution, the examiner rejected some of the pending claims in light of U.S. Patent 5,880,732 ("Tryding") and U.S. Publication No. 2002/0102998 ("Lin"). Tryding disclosed "a method and apparatus enabling the usage of a remote display monitor for presenting display data from a mobile telephone" through the generation of a "communications link between the mobile telephone and a receiver of a display monitor" that "enables the transmission of numerical and textual data intended to be displayed on . . . the larger screen of the remote display monitor." Defs.' Opening Markman Br. Ex. E at Abstract, ECF No. 65. Lin disclosed the transmission of rich content across a mobile device and an auxiliary rendering device "so that the content can be transcoded to a format suitable for the auxiliary rendering device." Id. Ex. F at Abstract.

In distinguishing Tryding, the patentee argued that, among other things:

Tryding fails to generally disclose converting the signal for display on the external display monitor. Tryding (e.g., at 2:26-38) emphasizes generation of a communications link between the mobile telephone and the display monitor. There is no mention of

conversion. Tryding notes that alphanumeric data (text) to be shown by the mobile telephone would be difficult to see due to its small size, and proposes sending the alphanumeric data to the display monitor, apparently because it would be easier to see on the larger display. There is no conversion of the alphanumeric data—it would be displayed larger because the external display is larger, but the underlying text would be exactly the same.

Applicant also notes that signal processing to accommodate transmission to the external display is merely with regard to the parameters required for the wireless communications link between the cellular phone and the external display, not the conversion of the underlying content (video or otherwise) so that it is appropriate for display on the alternative display (See, e.g., Tryding at 3:4-13). Accordingly, in Trying, there is no conversion of the signal for the alternative display.

Tryding also fails to disclose or suggest the particular conversion of the video signal claimed by Applicant. That is, the "converted video signal produced by the conversion module comprises a display format and a power level appropriate for driving the alternative display terminal." Tryding does not convert the signal to provide a display format or power level appropriate for driving the display. With regard to the display format, as noted Tryding merely passes the same alphanumeric character data that would be displayed on the cellular phone along to the external display.

...

Id. Ex. H at VIS-001681-82 (emphases added). Samsung reads the above explanation to limit "conversion of the video signal" to conversions of the underlying content. Defs.' Opening Markman Br. 17-18, ECF No. 65. VIS argues that the statements concerning content conversion were referring to "conversion of

the underlying signal content" and not the multimedia/data content. Pl.'s Resp. Markman Br. 12, ECF No. 69.

Here, the patentee's statements specifically distinguish Tryding based on its failure to disclose "converting" and "processing" signals. However, in describing the absence of such conversion or processing, the Applicant apparently refers to conversion of the display content (i.e., the "alphanumeric data" or "underlying content (video or otherwise)"). Considering the patentee's statements in full, and in light of the parties arguments at the Markman hearing, the Court concludes that they do not rise to the level of a specific disclaimer. Although the references to conversion of display content are somewhat problematic, the patentee's statements regarding Tryding are clearly concerned with distinguishing the claimed video signal conversion on the basis that Trying simply disclosed passing data through a cellular phone to an external display with only minimal processing to accommodate transmission over the established communication link. Furthermore, all of the patentee's bases for distinguishing Tryding concern the absence of a video signal conversion, while only two of those statements refer to converting the display content. Thus, the entirety of the Applicant's statements concerning Tryding do not limit video signal conversion to those conversions that also alter the underlying content.

This construction is supported by the Applicant's later summary of its position regarding Tryding:

As noted by the Examiner, Tryding fails to disclose providing a video signal to an external display monitor. (Office Action, at p.3). However, the Action fails to address that there is also no production of a converted video signal to provide the display format and power level appropriate for the alternative display monitor. With specific reference to the claim, Tryding fails to disclose or suggest "produc[ing] a converted video signal for use by the alternative display terminal, wherein the converted video signal produced by the conversion module comprises a display format and a power level appropriate for driving the alternative display terminal. . . ."

As noted, Tryding (e.g., at 2:26-38) emphasizes generation of a communications link between the mobile terminal and display monitor. **There is no mention of conversion of the video (or other display) signal.** Tryding proposes sending alphanumeric data to the display monitor, apparently because it would be easier to see on the larger display. However, there is no conversion of the alphanumeric data - it would be displayed larger because the external display is larger, but the underlying text would be exactly the same. There is thus no provision of a converted video signal such that it will have a display format appropriate for driving the alternative display terminal.

As noted in the Action, Tryding is also deficient in that in Tryding there is no provision of the converted video signal to have a power level appropriate for driving the alternative display terminal, and there is no disclosure of a video signal (or converted video signal) as claimed.

Defs.' Opening Markman Br. Ex. J at VIS-001638-39, ECF No. 65 (bolded emphases added). Again, the Applicant emphasized Tryding's failure to disclose a converted video signal. Although these statements similarly referenced content

conversion, they again, do not rise to the level of a clear disclaimer.

After distinguishing Tryding, the patentee addressed Lin, stating:

Lin does not remedy the deficiencies of Tryding. Lin describes a situation where a transcoding proxy is used as an intermediary between content servers (e.g., Internet content servers) and the mobile telephone. Rich content is ordinarily transcoded prior to delivery to the mobile telephone because the mobile telephone does not have the platform to handle the rich content (See Lin at [0004]). This transcoding traditionally removes rich content such as animations and the like so that they can be displayed on mobile telephones that do not have support for such features. In lieu of removal of rich content, Lin proposes sending the rich content to the cellular phone, and then sending the rich content from the cellular phone to the alternative display.

Again, Lin fails to disclose converting the video signal for display on the alternative display terminal, and more particularly that the "converted video signal produced by the conversion module comprises a display format and a power level appropriate for driving the alternative display terminal."

Lin offers no realization or application of the technical issues required for providing rich video content from a mobile terminal (e.g., cellular phone) to an alternative display terminal. ...

Regardless, in Lin there is clearly no conversion of the video signal to provide "a power level appropriate for driving the alternative display terminal," as claimed by the Applicant. ... **Thus, as with Tryding, there is clearly no conversion of the video signal in the cellular phone of Lin.**

Id. Ex. H at VIS-001682-83 (bolded emphases added). Unlike Tryding, the patentee's statements regarding Lin do not refer at

all to converting video content. The same is true of the patentee's later summary of its argument regarding Lin, which recites much of the above and then provides:

In Lin, the cellular device is at best a pass through device (presuming that it would be operable, which is dubious). Thus, as with Tryding, there is clearly no conversion of the video signal in the cellular phone of Lin. That being the case, Lin offers nothing more than Tryding with regard to these claimed features of Applicant's invention.

Id. Ex. J at VIS-001640.

Considered in full, the patentee's statements during the prosecution of the '492 patent do not clearly limit video signal conversions to conversions including a change to the underlying video content. Rather, they repeatedly describe this term as converting signals to produce display formats and power levels appropriate for driving the alternative display device. Accordingly, the Court finds no basis for ignoring the plain and ordinary meaning revealed by the claim terms and specification and, therefore, does not construe the disputed term to include Samsung's proposed limitation. See HTC Corp., 667 F.3d at 1276 (noting that "[c]laim language and the specification generally carry greater weight than the prosecution history").

Having carefully considered the parties' arguments, the Court concludes that the plain meaning of this term is clear from its use in the claim terms themselves and the specification. Accordingly, the Court agrees with VIS that this

term does not require construction. See U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("The Markman decisions do not hold that the trial judge must repeat or state every claim term in order to comply with the ruling that claim construction is for the court. Claim construction . . . is not an obligatory exercise in redundancy.").

c. Construction

Plain and ordinary meaning. No construction required.

4. "multimedia content item . . . destined for a destination device"

a. Proposed Constructions

VIS: Plain and ordinary meaning. No construction required.

Samsung: a multimedia content item that uniquely identifies the destination device on which it is to be displayed

b. Discussion

VIS contends that this term does not require construction. Samsung proposes a construction that limits the term to those "multimedia content items" that, themselves, identify their intended destination device. Neither party's position requires the Court to construe the terms "multimedia content item" or "destination device." Rather, the Court need only construe "destined" to determine whether this portion of the disputed term requires that the multimedia content item uniquely identify its destination device. See Vivid Techs., 200 F.3d at 803.

The disputed term appears in several independent and dependent claims in the '733 and '398 patents. See '733 patent, 29:10-32, 29:48-58, 30:4-28, 30:29-59, 31:1-34, 31:37-67, 32:35-47, 32:60-33:24, 33:45-34:3, 34:19-32, 34:48-35:15, 35:36-36:12; and 36:13-47; '398 patent, 29:10-29, 29:61-30:16, 30:17-49, 30:50-31:18, 31:19-54, 31:55-32:10, 32:11-34, 35:46-56, 36:16-27, and 36:53-64. All such claims refer to the multimedia content item as 1) having "originated from a source located outside a home location" or "designated location," and 2) as being "destined for a destination device located within the home location," or vice-versa (originating from a source in the home or designated location and destined for a device outside the home).⁵ Id.

The independent claims that employ the disputed term do so in reference to the first step of the claimed conversion processes and methods—the receipt of a multimedia content item. The subsequent steps in these processes and methods describe various uses for the destination device's signal format, address, and communications protocol, although not all claims do

⁵ Three of the '398 patent claims (11, 12, and 13) do not assign a location to the destination device. '398 patent, 30:17-31:54. Instead, they note that the multimedia content originated from a source "outside the designated location" and is simply "destined for a destination device." Id.

so with the same degree of specificity.⁶ Despite the differences among the independent claims that use this disputed term, all such claims clearly require that some information identifying a specific destination be readily discernible in the conversion process. The independent claims, do not however, identify the source of such information.

Similarly, many of the dependent claims fail to disclose the source of the information identifying the multimedia content's destination. Instead, they generally describe the use of such information. See, e.g., '733 patent, 29:40-43 ("The method of claim 4, where the destination device is recognized to be the television based upon the use of an address corresponding to the television by the mobile terminal."); id. at 32:28-31; and id. at 34:12-18. See also, id. at 34:37-40 ("The computer program product of claim 46, wherein a mapping table maps the identified destination device to an appropriate communications protocol, signal format and address.") (emphases added). Although the majority of dependent claims do not describe the

⁶ Compare '733 patent, 29:10-32 (describing first the receipt of "a multimedia content item . . . destined for a destination device" and then the determination of "a communications protocol, a signal format, and an address for the destination device," followed by the conversion of the content "according to the determined signal format" and the routing of the converted content "using the determined address and communications protocol") with '398 patent, 29:10-29 (describing the receipt of "a multimedia content item . . . destined for a destination device" and then only the conversion of that content "for reproduction according to a determined signal format of the destination device").

source of the identifying information, some do provide for specific sources. These dependent claims state that:

- 1) "the received requests for . . . multimedia content include an identification of the destination device," '733 patent, 32:14-16, 33:38-40, 35:29-31; or
- 2) "the multimedia content is received from the source in connection with a data package that identifies the destination device," '733 patent, 29:59-61; 32:48-50, and 34:33-36; '398 patent, 35:57-59, 36:28-30, and 36:65-67; or
- 3) "a predetermined processing category identifies a communication, signal format, and address for the destination device," '398 patent, 29:34-40, 33:51-57, and 34:63-35:2.⁷

The claims describing specific sources of destination device-identifying information depend from some, but not all, of the '733 and '398 patents independent claims.

Generally, dependent claims are construed to have a narrower scope than the claims from which they depend. See Phillips, 415 F.3d at 1315. "For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." Id. at 1314-15 (citing Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed. Cir. 2004)). See Dow Chem. Co. v. United States, 226 F.3d

⁷ The Court observes that this last category of dependent claims arguably requires an initial identification of the specific destination device from some other source before the claimed predetermined processing category could identify the listed characteristics of such source.

1334, 1341-42 (Fed.Cir.2000) (concluding that an independent claim should be given broader scope than a dependent claim to avoid rendering the dependent claim redundant).

Here, some of the dependent claims contain limitations requiring that the destination device be identified by 1) a data package received in connection with the multimedia content, 2) the received request for such content, or, 3) a predetermined processing category. The presence of these limitations gives rise to the presumption that the independent claims from which they depend do not require that the destination device be identified in the specified ways. Because claim terms "are normally used consistently throughout the patent," Phillips, 415 F.3d at 1314, this interpretation of the disputed term (i.e., permitting receipt of content not in connection with an identifying data package, a received request, or predetermined processing category) applies to all uses of the disputed term, even though some of the independent claims employing such term do not have the same limiting dependent claims. Because the independent claims are not limited to content received in these ways, the question of how the destination device is identified and accounted for in the claimed conversion processes remains. The claims themselves provide little guidance on this point. However, the Court notes that the fact that dependent claims provide various ways of identifying the destination device

suggests that the independent claims do not contemplate a specific source of identification.

Turning next to the relevant specification (the '733 specification), the language therein provides that the functionality of the MC System depicted in Figure 16 "includes receipt, conversion and transmission of content in two directions. It also includes facilities for mapping and routing content to various connected devices and data storage. . . ." E.g., '733 patent, 20:29-33. Although the '733 specification states that, in at least one embodiment, content is received and converted "in both directions depending upon the connected devices and corresponding protocols used by such devices," id. at 19:61-67, it does not assign a default method for identifying the specifically intended destination device. Rather, as do the dependent claims, the specification discusses only potential ways to identify such device. See, e.g., id. 20:16-22:49.

All of the means for identifying a destination device discussed in the '733 specification contemplate the same identification methods included in the dependent claims discussed above.⁸ In addition to these methods, the '733

⁸ The '733 specification discloses the identification of the destination device via the received request. '733 patent, 20:24-28 (describing "a user's phone call (wireless or wired)" being routed to the destination device "as designated by the user"). It further discloses the inclusion of a destination device's identifying information in a data package accompanying the inbound communication. Id. at 21:15-23 (stating that such data package "may be in the form of

specification identifies at least one other way to identify the destination device. Specifically, it provides that:

Devices that are intended to work with the MC System may also be equipped with software and/or hardware that allows them to insert and deliver the appropriate information in communications with the MC System. For example, a cellular phone may be equipped with software that provides the appropriately configured data package in initiating communications with the MC System that are directed to destination devices.

a unique device identifier that is associated with each device managed by the MC System"). Regarding this data package, the '733 specification provides:

[I]nformation within the received data package may indicate the format (e.g., TCP package in Internet) for transmission and the format (e.g., data package defined by WCDMA standard in 3G) for receiving, as well as the destination address corresponding to the converted data format. The overhead information within the received data package can inform the MC/CHS regarding the next transmission protocol and matched format. . . . This information informs the MC/CHS regarding the inbound data format transmission protocol, and also the outbound data format and the transmission protocol corresponding to the data format. . . . In a simple example, all communications to a given device may be required according to the same format and same address.

Id. at 21:27-45. In addition to received requests and data packages, the '733 specification also discloses the identification of a destination device through a predetermined processing category. Id. at 21:24-27 ("Additionally, or alternatively, the MC System (and/or CHS) can obtain formatting, address, and other information by referencing portions of the received data package according to a predefined protocol."). Accordingly, the '733 specification describes, in exemplary terms, all of the potential means of identifying the destination device contemplated by the dependent claims discussed above. However, the '733 specification's description of the predetermined protocols teaches that the processing categories described in the claim terms do not, themselves, identify the destination device, but instead obtain information regarding the device already identified by another means, such as the data package.

'733 patent, 22:35-42 (emphases added). This described embodiment contemplates identification of the destination device through the operation of software and/or hardware that independently provides a data package.

In sum, both the claim terms and the specification describe a number of ways to identify the destination device to which a multimedia content item will be routed. All of these methods are described in dependent claims or by examples provided in the specification. The fact that the specification describes "preferred embodiments or specific examples" should not be relied upon to limit otherwise broad claim language. Tex. Instruments, Inc. v. U.S. Intern. Trade Com'n, 805 F.2d 1558, 1563 (Fed. Cir. 1989). See also, Howmedica Osteonics Corp. v. Wright Med. Tech., Inc., 540 F.3d 1337, 1345 (Fed. Cir. 2008) (noting that the Federal Circuit has repeatedly held that a single embodiment in the specification is "insufficient to limit otherwise broad claim language."). There is simply nothing readily apparent in the patents, themselves, requiring that the multimedia content item contain a unique device identifier, as Samsung proposes. Indeed, doing so would appear to exclude the other methods of identification described (such as user commands and data packages derived independently from the multimedia content item via the operation of software or hardware).

Generally, the court should "not interpret claim terms in a way that excludes disclosed examples in the specification." ArcelorMittal France v. AK Steel Corp., 700 F.3d 1314, 1321 (Fed. Cir. 2012) (quoting Verizon Servs. Corp. v. Vonage Holding Corp., 503 F.3d 1295, 1305 (Fed. Cir. 2007)). Samsung argues that the final construction of this disputed term need not contemplate all of the embodiments reviewed above, because such embodiments are "alternative" and not "preferred" embodiments. Defs.' Reply Markman Br. 4, ECF No. 70 (quoting TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc., 529 F.3d 1364, 1373 (Fed. Cir. 2008)) ("[T]he mere fact that there is an alternative embodiment disclosed in the [asserted] patent that is not encompassed by the district court's claim construction does not outweigh the language of the claim, especially when the court's construction is supported by the intrinsic evidence."). However, the '733 specification does not, as did the specification in TIP Systems, express a preference for one embodiment over the others. Id. Rather, the '733 patent family includes only broadly drafted independent claims that do not specify how the destination device is to be identified and a variety of exemplary embodiments for accomplishing such identification in their dependent claims and shared specification. Thus, Samsung's basis for construing this disputed term in a manner that obviates several of the exemplary embodiments is without merit.

For the above reasons, the Court rejects Samsung's proposed construction of this term. Having rejected Samsung's proposal, the Court agrees with VIS that no other construction of the instant term is necessary, as such term is comprised of easy to comprehend language with a clear meaning, and claim construction "is not an obligatory exercise in redundancy." Ethicon, 103 F.3d at 1568. Notably, "[t]he task of comprehending [claim] words is not always a difficult one," and in some cases claim construction "'involves little more than the application of the widely accepted meaning of commonly understood words.'" Acumed LLC, 483 F.3d at 805 (quoting Phillips, 415 F.3d at 1314). Because the disputed language includes commonly understood words with widely accepted meanings, made clear by the context in which the language is used, the Court finds it unnecessary to adopt a construction that differs from the plain language of the disputed term.⁹

c. Construction

Plain and ordinary meaning. No construction required.

⁹ On this point, the Court acknowledges the alternative constructions that VIS proposed at the Markman hearing ("ultimately meant for display upon" and "fit for delivery"), but determines that such alternative constructions merely rephrase the plain language of the only portion of this claim term that is in dispute. See C.R. Bard, 388 F.3d at 863 ("[W]e question the need to consult a dictionary to determine the meaning of such well-known terms. . . . Indeed, Bard itself 'submits that merely rephrasing or paraphrasing the plain language of a claim by substituting synonyms does not represent genuine claim construction.'").

5. "establishing a predetermined channel"

a. Proposed Constructions

VIS: Plain and ordinary meaning. No construction required.

VIS Alternative: establishing a communication pathway, such as an HDMI connection or the like

Samsung: specifying a selectable frequency band of an input on the destination device for receiving multimedia content

b. Discussion

The parties' dispute concerning this term centers on the proper construction of "predetermined channel." Samsung argues for a construction that limits "predetermined channel" to selectable frequencies, such as traditional television channels, based on the relevant specification and the examiner's statements during the '733 patent's prosecution history. VIS contends that the term does not require construction or, alternatively, that it should be given the broad construction, "communication pathway."

As Samsung observes, the relevant specification (the '733 specification), uses the term "channel" in varying contexts. Defs.' Opening Markman Br. 10, ECF No. 65. Compare '733 patent, 20:1-9 (describing the receipt of content via a "channel" "in a fashion similar to that used for accessing traditional television channels") with id. at 25:22-29 (describing "communication channels" used to transmit data, including direct

and wireless connections). Because such references could be read as giving the term "channel" a broader or narrower meaning, depending on the context, the Court concludes this disputed term requires some construction.

Before turning to the heart of the parties' dispute, the Court observes that the latter half of VIS's alternative construction provides a representative example of a communication pathway. For the reasons stated in the above analysis of VIS's similar proposal regarding the construction of "mobile terminal," the Court concludes that a construction of this disputed term including such exemplary language, which does not "define the outer limits of the claim term," is improper. Phillips, 415 F.3d at 1323; see also supra § IV(1)(d)(iii)(2). Accordingly, this aspect of VIS's proposed construction is rejected.¹⁰

The term "establishing a predetermined channel" appears in nearly all of the '733 and '398 patents' independent claims.¹¹

¹⁰ The Court notes that VIS conceded at the Markman hearing that the exemplary language in its alternative construction could be omitted. Hr'g Tr. 108-09, June 11, 2013, ECF No. 92.

¹¹ Samsung asserts that the limitation appears in all of the independent claims, however the following claims do not disclose "sending" content and, therefore do not include the limitation: '733 patent claims 17, 33, 50, and 58 (31:37-67, 32:60-33:24, 34:48-35:15, and 36:13-47). The limitation is included in all of the '398 patent's independent claims.

Every such independent claim concludes with the following three-clause limitation:

Wherein the sending comprises:

establishing a predetermined channel operatively in communication with the destination device, and

transporting the multimedia content to the destination device via said predetermined channel,

for directing the destination device to display the multimedia content in conjunction with a navigational command to the destination device for the predetermined channel.

E.g., '733 patent, 29:25-32 (emphases added). The '733 patent family claims do not further define the term "predetermined channel." Each of the '733 and '398 patents does, however, contain dependent claims that alternatively reference "predetermined channel[s]" and "predetermined tunable channel[s]." See, e.g., '733 patent, 32:32-34; '398 patent, 34:30-40. Reviewing the claim language, the Court finds little that clearly supports one party's proposed construction over the other.¹²

¹² On this point, the Court observes that an exemplary reference to a "predetermined tunable channel" in only two of the several dependent claims related to this term does not weigh significantly in favor of Samsung's proposed narrow construction. See 32:32-34 & 34:16-18. Similarly, the fact that many of the '398 patent claims state that this term comprises "initiating a communication pathway" and contemplate embodiments wherein the communication pathway is an HDMI connection does not require the broader construction that VIS proposes. See, e.g., '398 patent, 34:30-44. Indeed a tunable channel might "implement" an HDMI connection by activating, through a selectable frequency band, a pre-existing, physical HDMI connection between two devices.

Similarly, '733 specification refers to both "predetermined channel[s]" and "predetermined tunable channel[s]." Compare '733 patent, 3:21-32 (summarizing the claimed invention and describing one embodiment that "displays the video content at a predetermined tunable channel") with id. at 26:41-55 (describing an embodiment of the claimed process in which the final step comprises directing the television "to display the converted content on a predetermined channel" and providing alternative embodiments of the predetermined channel, including a "tunable channel" or a set-top box channel that provides content through "an HDMI, component cable, S-video, or other connection"). Although the '733 specification's use of the term "predetermined channel" does little to elucidate the proper construction of this term, the Court finds its related descriptions of various "communication channel[s]" to be instructive. Specifically, the '733 specification describes "communication channels between the MC System and the various local user terminals," such as:

(1) direct connection[s] using the available transmission port/standard such as USB, RS232, TV cable, Ethernet, Telephone line, etc.; (2) Wireless Personal Area Network[s] such as UWB, Bluetooth, WLAN, etc.; (3) Long-range wireless connections such as WiMax, Satellite, e.g., VSAT, TV broadcast, etc.' or (4) Wire-line connection such as DSL, Cable, Ethernet, etc."

Id. at 25:13-29. The parties disagree as to whether "channel" is used interchangeably among the terms "predetermined channel"

and "communication channel." Samsung contends that the term is given a distinct meaning in each context, while VIS argues that a "tunable channel" is merely one example of the many "communication channels" disclosed in the '733 specification.

There is a presumption that "the same claim term in the same or related patents carries the same construed meaning." Omega Eng'g, 334 F.3d at 1334. However, the same claim term may be given different constructions in light of the context in which that term is used within the claims and specification. Aventis Pharms., 715 F.3d at 1374 (citing Microprocessor Enhancement Corp. v. Tex. Instruments, Inc., 520 F.3d 1367, 1375 (Fed. Cir. 2008) (holding that, despite the presumption of consistent use of claim terms, there is no requirement that a claim term be construed uniformly, particularly where doing so would lead to a "nonsensical reading"). Here, the specification discusses "tunable channels" in only exemplary terms, while describing several types of "communication channels" in relation to all of the disclosed embodiments of the claimed system depicted in Figure 16. Compare id. at 20:5-9 (disclosing one embodiment in which "channels" are used to access and view content "in a fashion similar to that used for accessing traditional television channels") with id. at 25:14-29 (summarizing the general features of the claimed system and listing several different types of "communication channels" that

may be used to implement the claimed data transmission). Accordingly, the reference to "traditional television channels" on which Samsung relies is summarized in the broader discussion of "communication channels," suggesting that the term "channel" is, as VIS contends, given the same meaning across the references contained in the specification. To fully resolve this question, however, the Court considers the prosecution history related to this disputed term.

In support of its proposed limited construction of "predetermined channel[s]," Samsung relies on an email from the examiner to the patentee in which a proposed amendment was discussed with reference only to the embodiment describing the provision of content through "channels" analogous to "traditional television channels." Defs.' Opening Markman Br. Ex. A at VIS-0001197, ECF No. 65. Samsung contends that the examiner's statement weighs in favor of their limited construction of "predetermined channel" because it shows that the "claim language was intended to reflect the description of a tunable channel of a television," as described in the referenced embodiment.

Generally, "unilateral statements by an examiner do not give rise to a clear disavowal of claim scope by an applicant." Salazar v. Procter & Gamble Co., 414 F.3d 1342, 1347 (Fed. Cir. 2005). Although an examiner's statement "may be evidence of how

one skilled in the art understood the term at the time the application was filed," id., a full review of the '733 patent's prosecution history reveals, as VIS argues, that Samsung's proposed limitation was rejected during the course of the '733 patent's prosecution. The Notice of Allowance specifically removed references to "tunable channels" when describing the operation of the "predetermined channel" in the relevant independent claims. See Defs.' Opening Markman Br. Ex. B at VIS-001843 (striking the language "directing the destination device to display the multimedia content item at a predetermined tunable channel" and replacing it with a sending process comprised of several steps involving a "predetermined channel"); id. at VIS-001845 (same); id. at VIS-001855 (same). This change, which occurred after the email exchange on which Samsung relies, reveals that any limitation of this disputed term to "tunable" channels was expressly rejected. Thus, whatever the examiner's initial recommendations, "predetermined channels" were clearly contemplated as encompassing more than "tunable channels" when the Notice of Allowability issued. In light of this clear indication of meaning, the Court concludes that the prosecution history does not support Samsung's proposed limitation. The claim language and specification do refer to "predetermined tunable channels," however such references are exemplary and must be read in context of the specification's

broader discussion of the various communication channels used to implement the claimed invention and the prosecution history's clear rejection of the proposed limitation.

The removal of "tunable channel" from the language of the independent claims further informs the Court's analysis of the inclusion of that term in two of the '733 patent's dependent claims. Generally, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." Phillips, 415 F.3d at 1314-15. Here, the '733 patent's prosecution history confirms what the Court is entitled to presume—that the '733 patent's independent claims describing the establishment of a "predetermined channel" are not limited, as the related dependent claims are, to "tunable channels." Absent such limitation, Samsung's proposed construction is inapposite.

Samsung's argument that the specification distinguishes between "channels" and "connections" does not convince the Court otherwise. See Defs.' Opening Markman Br. 12, ECF No. 65. The discussion on which Samsung relies in support of this distinction describes alternative embodiments for the final step of a claimed "process for directing a television to display content using signals received from a remote location through a cellular communications network." '733 patent, 25:63-66; see also id. at 26:41-55 (describing the final step of that process

as, and alternatively describing the "predetermined channel" as, a "tunable channel" or "[a] given channel on a set top box" provided "through a conventional connection to the television such as HDMI, component cable, S-video or other connection"). Samsung's attempt to discern a marked distinction from this reference is undermined by the '733 specification's earlier references to "connection channels," which use the term interchangeably with "communication channels" in the specification's broader description of the types of channels through which data is transmitted, including both tunable frequencies and hard-wired connections. See 24:64-25:29.

Considering the intrinsic record as a whole, the Court finds that any discussion of "predetermined channels" as tunable or selectable frequencies is exemplary only. Accordingly, the Court concludes that a broader reading, based on the '733 specification's discussion of several types of "communication channels," is appropriate.

In arguing for this broader construction, VIS proposes a definition of "predetermined channel" as "communication pathway." This proposal is based on several of the '398 patent's dependent claims, which describe methods for "establishing the predetermined channel," that include "managing a communication path for . . . transporting the multimedia content item to the destination device." E.g., '398 patent

32:56-64 ("[S]aid managing includes initiating the communication path, and said initiating the communication path includes engaging in an authentication procedure with the destination device prior to said transporting the multimedia content item to the destination device over the communication path.")). Reviewing these dependent claims in context, the Court concludes that they employ the term "communication path" interchangeably with "channel." Although the dependent claims further limit the process by which such channels are established, those limitations do not inform the referenced "communication path[s]," which, in context, are clearly used to describe the channels established through the process described in these dependent claims.

Likewise, the specification employs the terms "pathway" and "channel" interchangeably to describe the means by which data or content is delivered across various devices. See, e.g., '733 patent, 8:49-54 ("The locally applicable content may be sent and delivered upon request by users" over various "communication pathways," such as radio or cellular networks.); id. at 10:37-42 (describing communications via "separate secure communication channel[s]," such as wireless personal area networks and wireless hubs); id. at 23:23-28 (describing communications of "consumer electronic items . . . with the CHS through wireless channels such as Bluetooth, UWB, NFC, or wire line connection").

This construction is further supported by the extrinsic evidence before the Court. Specifically, the technical definitions provided by Samsung define a "channel" to include a "[s]ignal transmission or processing path dedicated to specific signal or signal component, e.g., 'chrominance channel,'" Defs.' Opening Markman Br. Ex. C, ECF No. 65 (emphasis added), and "a route along which information may travel or be stored in a data-processing system or computer," id. Ex. D (emphasis added).¹³ Accordingly, the Court concludes a proper construction of this disputed term includes the description of a "channel" as a communication pathway.

Although VIS's proposed construction better defines the proper scope of this claim term, the Court finds that such construction fails to give meaning to the term "predetermined." Generally, claims should be construed so as to give effect to all of their terms. See, e.g., Bicon, Inc. v. Straumann Co., 441 F.3d 945, 950 (Fed. Cir. 2006).¹⁴ While Samsung's proposal

¹³ Because the Court finds that the intrinsic record does not support Samsung's limited construction of this term, it does not consider those definitions included in the referenced exhibits as instructive to its analysis. Conversely, and as noted above, the alternative definitions provided support VIS's proposed construction, which the intrinsic record recommends.

¹⁴ "Allowing a patentee to argue that physical structures and characteristics specifically described in a claim are merely superfluous would render the scope of the patent ambiguous, leaving examiners and the public to guess about which claim language the drafter deems necessary to his claimed invention and which language is merely superfluous, nonlimiting elaboration. For that reason, claims

improperly limits the scope of this disputed term, it does give effect to the term "predetermined" through its inclusion of the term "specifying," which indicates the selection or establishment of a particular communication pathway, as suggested by the term "predetermined." As Samsung's is the only proposed construction of this term before the Court, the Court adopts the same as the proper construction of the term "predetermined."

Having carefully considered the parties' proposed constructions and the arguments advanced at the Markman hearing, particularly with reference to the intrinsic record and the Notice of Allowability's express rejection of Samsung's proposed limitation, the Court adopts the below construction of "establishing a predetermined channel."

c. Construction

Specifying a communication pathway

6. "in conjunction with a navigational command to the destination device for the predetermined channel"

a. Proposed Constructions

VIS: Plain and ordinary meaning. No construction required.

VIS Alternative: in conjunction with a command to the destination device to select the communication pathway

are interpreted with an eye toward giving effect to all terms in the claim." Bicon, 441 F.3d at 950.

Samsung: upon selection amongst a plurality of selectable frequency bands of the input of the specified frequency band for receiving the multimedia content

b. Discussion

This disputed term appears in all of the claims cited in the above discussion of the term "establishing a predetermined channel." The parties' proposed constructions are tied to their respective views concerning the proper construction of that term and, in particular, of the "predetermined channel."¹⁵ In light of the Court's determination that the prior disputed term required construction, the Court similarly concludes that some construction of the plain and ordinary meaning of this claim term is needed.

The parties agree that "a navigational command" involves the selection of the predetermined channel (however construed).¹⁶

¹⁵ At the Markman hearing, the parties agreed that the construction of this term is necessarily tied to and derived from the proper construction of the "predetermined channel." Hr'g Tr. 111-12, June 11, 2013, ECF No. 92.

¹⁶ Samsung cites portions of the specification and the intrinsic record for the proposition that "navigation" to an appropriate channel involves the selection of that channel's frequency band. Defs.' Opening Markman Br. 14-15, ECF No. 65. Despite framing the discussion as a construction of the term "navigation," the Court observes that this argument does not concern such construction. Rather, it is directed at further supporting Samsung's position that the channels being navigated should be interpreted as "selectable frequencies." Id. at 15. Indeed, in stating their position, Samsung specifically equates the terms "navigating" and "selecting." Id. ("A user thus navigates to a particular channel ... by selecting the frequency band . . . associated with that channel."). In its reply brief, Samsung makes much of VIS's "eliminat[ion]" of the term "navigational" and rephrasing of "for the predetermined channel" as "to select the communication pathway." Defs.' Reply Markman Br. 10, ECF No. 70.

Compare Pl.'s Opening Markman Br. 17, ECF No. 64 with Defs.' Opening Markman Br. 15, ECF No. 65. Accordingly, the Court concludes that the term "navigational" is properly construed as "selection" or "selecting."

The term "navigational," however, does not occur in a vacuum. Rather, it modifies the "command to the destination device" provided for in the claim term. Claim construction should give meaning to the entire term. See, e.g., Bicon, 441 F.3d at 950 ("[C]laims are interpreted with an eye toward giving effect to all terms in the claim."). VIS's proposed construction incorporates both the command and the purpose of such command (i.e., navigating) by construing "navigational command to the destination device" as "a command to the destination device to select" the predetermined channel. Samsung's proposed construction fails to similarly incorporate both aspects of this portion of the claim term. While Samsung's proposal contemplates the need for navigation by including the phrase "upon selection," it does not appear to give any meaning to that portion of the term requiring a "command to the destination device." Instead, Samsung's construction merely specifies that the predetermined channel is selected from among

This argument is incongruous in light of Samsung's own apparent construction of "navigational" as "selection . . . for receiving the multimedia content."

a plurality of channels.¹⁷ Accordingly, the Court finds that the portion of VIS's proposed construction requiring "a command to the destination device to select" the predetermined channel is the proper construction of this portion of the claim term, which requires some command or direction to the destination device in addition to the selection of the predetermined channel.

The Court construes the remaining portion of this disputed claim term, "for the predetermined channel," in accordance with the construction adopted for the preceding claim term, "establishing a predetermined channel." Accordingly, the construction given to "predetermined channel" is reflected in the construction of this term.

Having carefully considered the parties' proposed constructions and the arguments advanced at the Markman hearing, the Court adopts the below construction of "in conjunction with a navigational command to the destination device for the predetermined channel."

c. Construction

in conjunction with a command to the destination device to select the communication pathway.

¹⁷ Samsung cites to the '733 specification and to extrinsic evidence to support its argument that "navigation" must be construed as "tuning" or choosing among selectable frequencies. These arguments, however, do not address that aspect of the claim term requiring a command.

7-9. "conversion module," "conversion device," and "processing unit"

a. Proposed Constructions

VIS: Not governed by 35 U.S.C. § 112(f). However, to the extent governed by section 112(f), then:

Function: processing a video signal to produce a converted video signal for use by the alternative display terminal.

Structure: Any of the following: (1) a microprocessor programmed to perform the algorithm of Figure 4; (2) the mobile terminal signal conversion module (MTSCM) disclosed in Fig. 2; (3) the MTSCM disclosed in Fig. 3; (4) any combination of software, hardware, and/or firmware programmed to decompress a video signal, send the decompressed video signal to a Digital/Digital Video Encoder, thereby preparing the output signal for use by the alternative display; (5) any combination of software, hardware, and/or firmware programmed to decompress a video signal, send the decompressed video signal to a Digital/Analog Video Encoder, thereby preparing the output signal for use by the alternative display; or (6) equivalents of the foregoing.

Samsung: Governed by § 112(f).

Function: processing a video signal to produce a converted video signal for use by the alternative display terminal.

Structure: the closest corresponding structure is a Digital/Analog Video Encoder and/or Digital/Digital Video Encoder.

b. Discussion

The parties dispute whether these claim terms are means-plus-function claims governed by 35 U.S.C. § 112(f). Because

these terms are used interchangeably across the '492 patent family's nearly identical claims and because the parties advance the same arguments as to the applicability of § 112(f) to each term, the Court considers the claims together.¹⁸

Pursuant to 35 U.S.C. § 112(f), a claim element can be expressed as a means for performing a specified function without reciting the structure or material that performs the claimed function. 35 U.S.C. § 112(f); accord Power Integrations, Inc. v. Fairchild Semiconductor Intern., Inc., 711 F.3d 1348, 1363-64 (Fed. Cir. 2013). Whether a claim is in means-plus-function form is a question for the court during claim construction. See Inventio AG v. ThyssenKrupp Elevator Americas Corp., 649 F.3d 1350, 1356 (Fed. Cir. 2011).

To determine whether § 112(f) is operative, courts generally apply two presumptions. First, it is presumed that, § 112(f) applies to claims that use the word "means" and recite performance of a function. See Rembrandt Data Techs., LP v. AOL, LLC, 641 F.3d 1331, 1340 (Fed. Cir. 2011). Conversely, when a claim does not use the word "means," courts presume that the claim is not governed by § 112(f). Power Integrations, 711

¹⁸ Although Samsung argued against such an approach, based on alleged differences drawn from the prosecution histories of the '711, '268, and '381 patents, the Court rejects this argument, particularly in light of Samsung's own recognition that all of the terms "should be treated under § 112(f) for the same reasons discussed . . . regarding the term 'conversion module.'" Defs.' Opening Markman Br. 27 & 28, ECF No. 65.

F.3d at 1364; see also Phillips, 415 F.3d at 1311. Both presumptions are rebuttable by a preponderance of the evidence, however the Federal Circuit has emphasized that "the presumption flowing from the absence of the term 'means' is a strong one that is not readily overcome." Lighting World v. Birchwood Lighting, Inc., 382 F.3d 1354, 1358 (Fed. Cir. 2004).

Here, the disputed claim terms do not use the word "means;" rather, they use "conversion module," "conversion device," and "processing unit." However, just because a claim does not include the catch-word does not mean that § 112(f) does not apply. "If . . . the claim term recites a function without reciting sufficient structure for performing that function, the presumption [against the application of § 112(f)] falls and means-plus-function claiming applies." Power Integrations, 711 F.3d at 1364 (emphasis in original) (citing Watts v. XL Sys., Inc., 232 F.3d 877, 880 (Fed. Cir. 2000)). Whether a claim "recites sufficient structure to avoid means-plus-function claiming" is determined "from the vantage point of an ordinarily skilled artisan." Id.

The mere presence of a functional expression in a claim is not sufficient to invoke § 112(f). See TriMed, Inc. v. Stryker Corp., 514 F.3d 1256, 1259 (Fed. Cir. 2008). "The proper inquiry is whether the claim limitation itself, when read in light of the specification, connotes to the ordinarily skilled

artisan a sufficiently definite structure for performing the identified functions." Power Integrations, 711 F.3d at 1365 (citing Apex, Inc. v. Raritan Comp., Inc., 325 F.3d 1364, 1373 (Fed. Cir. 2003)). The Federal Circuit has held that:

In cases where the claims do not recite the term "means," considering intrinsic and extrinsic evidence is usually helpful, as the litigated issue often reduces to whether skilled artisans, after reading the patent, would conclude that a claim limitation is so devoid of structure that the drafter constructively engaged in means-plus-function claiming.

Inventio AG, 649 F.3d at 1357 (emphasis added).

A review of the intrinsic record here reveals that the disputed terms, used in nearly identical contexts across the '492 patent family, are not means-plus-function claims. First, the claims Samsung cites in support of a means-plus-function construction are method claims describing a method for processing signals to accommodate reproduction by an alternative display terminal. See, e.g., '492 patent, 8:25-50. The fact that a method discloses a device used in the performance of that method without specifying the structure of that device is not surprising, given the invention being claimed (i.e., the method).

Second, the cited claims include dependent claims that suggest structure, such as location and other specified features. For example, claim 5 of the '492 patent discloses a method "wherein the conversion module resides in the alternative

display terminal." '492 patent, 8:61-62. In another example, claim 10 to the '268 patent describes "[t]he method of claim 1, wherein the conversion device includes the mobile terminal and an intermediary between the mobile terminal and the alternative display terminal." '268 patent, 9:9-11. See also '492 patent, 9:42-46 (describing "[t]he system of claim 12, wherein the means for receiving the video signal, means for processing the video signal to produce the converted video signal, and means for providing the converted video signal to the display terminal reside in a conversion module within the alternative display terminal. "). Thus, at least some of the related dependent claims disclose a sufficient structure to avoid means-plus-function claiming. See Power Integrations, 711 F.3d at 1364.

Third, the patents-in-suit disclose means-plus-function claims that do not include the disputed terms. For example, claim 12 of the '492 patent is a means-plus-function claim that discloses a "system for processing signals to accommodate reproduction by an alternative display terminal . . . comprising means for receiving a video signal[,]. . . . means for processing the video signal[,]. . . and means for providing the converted video signal to the alternative display terminal." '492 patent, 9:10-31. Because this claim uses the word "means," there is a presumption that it is a means-plus-function claim. See Rembrandt Data Techs., 641 F.3d at 1342. Notably, the

disputed terms ("conversion module," "conversion device," and "processing unit") are not disclosed anywhere in this claim. Reading the specification (which discloses the "mobile terminal signal conversion module") reveals that the "structure" of such a means-plus-function claim would be the MTSCM, a "conversion module." See '492 patent, 3:51-4:36. That the patents-in-suit include claims, such as claim 12 of the '492 patent, that are drafted in means-plus-function form shows that the patentee knew how to claim means-plus-function and did not attempt to do so when claiming methods, systems, apparatuses, and computer readable mediums that include the disputed terms.

Fourth, when determining whether the disputed terms are claimed as means-plus-function under § 112(f), the Federal Circuit has recommended that the Court consider the intrinsic and extrinsic evidence to determine whether the terms state a sufficiently definite structure. Here, the '492 patent claims include "conversion modules." Looking to the shared specification, the Court finds that it discloses and teaches the "mobile terminal signal conversion module" and describes this invention at length. The Court reads the disputed term "conversion module," to include the MTSCM taught in the specification and, accordingly, determines that this disputed term has a sufficiently definite structure to avoid means-plus-function claiming.

Having determined that "conversion module" has such sufficiently definite structure, the Court concludes that proper constructions of the other disputed terms, "conversion device" and "processing unit," include the same structure, as those terms are used in the same manner and to describe the same inventions in the '711, '268, '381 claims. When terms lack discernibly different meanings, "the patentee [may have simply] used different words to express similar concepts, even though" doing so is a "confusing drafting practice." Innova/Pure Water, 381 F.3d at 1120 (citing Bancorp Servs., LLC v. Hartford Life Ins. Co., 359 F.3d 1367, 1373 (noting that the correspondence between a reference in a claim and one in the specification "provides substantial support" for the "contention that, as used in the patent, the terms . . . are equivalent"))). Here, although the claims across the patents-in-suit employ different terms to describe the module or device that accomplishes the claimed video signal conversion process, the identical contexts in which these terms are used compels the conclusion that, although grammatically distinct, the terms lack discernibly different meanings. This construction is supported, at least in part by the relevant shared specification, which, in its sole reference to "conversion device," employs the term interchangeably with the more-frequently used "conversion module." See, e.g., '492 patent, 5:4-8 ("The MTSCM may also be

provided in the form of a chipset, configured for inclusion in a mobile terminal, dedicated separate signal conversion device, or external display terminal, and to provide the described mobile terminal signal conversion functionality."). Additionally, as Samsung acknowledges, the relevant prosecution histories suggest that the choice to use one term over another across the '492 patent was based primarily on the "language particulars that are preferred by the [PTO]." Defs.' Opening Markman Br. 28 & Ex. Q at VIS-002517 (noting that the term conversion module has been replaced with the term conversion device).

Considering the intrinsic record in full, the Court concludes, for all of the reasons stated above that none of these disputed terms lacks sufficient structure to justify application of means-plus-function claiming. There is a strong presumption against the application of such claiming in this case and the Court finds that such presumption has not been rebutted. In the absence of any alternative proposed constructions, the Court concludes that no construction is required.

Construction

§ 112(f) does not apply. No construction required.

IV. CONCLUSION

For the reasons set forth above, the Court issues this Opinion and Order as the construction of the disputed claim terms in the '492 patent family and the '733 patent family.

The Clerk is **REQUESTED** to send a copy of this Opinion and Order to counsel of record for the parties.

It is so **ORDERED**.

/s/ 

Mark S. Davis
UNITED STATES DISTRICT JUDGE

Norfolk, Virginia
September 25, 2013